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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/681,259	Applicant(s) SINDHU, PRADEEP	
	Examiner JASON E. MATTIS	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _15 January 2009_.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _2-5,7,8,10,12,17-22,24,26,27 and 43-54_ is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _2-5,7,8,10,12,17-22,24,26,27 and 43-54_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the Request for Continued Examination filed 1/15/09. Claims 1, 6, 9, 11, 13-16, 23, 25, and 28-42 have been canceled. Claims 2-5, 7, 8, 10, 12, 17-22, 24, 26, 27, and 43-54 are currently pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 2-4, 7, 8, 10, 12, 17, 18, 20-22, 24, 26, 27, 43, 44, and 46-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. (U.S. Pat. 6512761 B1) in view of Akahane et al. (U.S. Publication US 2004/0010617 A1).

With respect to claim 43, Schuster et al. discloses a method comprising establishing by a network device a plurality of paths in a network **(See column 14 lines 35-53 and Figure 2 of Schuster et al. for reference to a method of selecting among routes that have been established in a network via a transmitter 12, which is a network device)**. Schuster et al. also discloses sending by the network device a plurality of reflector packets including a first type of packet used to determine timing related information on each of the plurality of paths and receiving by the network device responses on each of the plurality of paths in response to the packets **(See column 12 lines 12-32, column 12 line 58 to column 13 line 7, column 14 line 54 to column 15 line 16, column 15 lines 29-40, and Figures 4 and 5 of Schuster et al. for reference to the transmitter 12 measuring the delay over a plurality of paths by sending out multiple packets using the well known ping procedure, which includes packets used to determine timing related information, and for reference to the transmitter 12 receiving responses on the paths corresponding to the packets sent using the ping procedure)**. Schuster further discloses analyzing by the network device response times associated with the responses to the first type of packets and selecting by the network device one of the plurality of paths based on a comparison of the response times to a threshold **(See column 14 line 54 to column 15 line 16 and Figures 4 and 5 of Schuster et al. for reference to transmitter 12 using the responses to determine a delay for each of the paths and selecting a path based on a comparison of the delays to a threshold)**. Schuster also discloses initiating by the network device a data transfer on the selected path **(See column 14 line 54 to column 15 line 16 and Figures 4 and 5 of Schuster et al. for reference to transmitter 12 routing a signal over a selected path)**. Schuster et al. does not explicitly disclose also using a second type of packet used to perform a control related function, analyzing responses to the second type of packet to determine a state of network resources, and selecting a path based on the state of network resources.

With respect to claim 46, Schuster et al. discloses a method performed by a network device comprising sending by an interface of the network device a plurality of reflector packets including a first type of packet used to determine time delay on each of multiple paths in a network and receiving by a transmit/received element of the network device acknowledgements on each of the plurality of paths in response to the packets **(See column 12 lines 12-32, column 12 line 58 to column 13 line 7, column 14 line 54 to column 15 line 16, column 15 lines 29-40, and Figures 2, 4, and 5 of Schuster et al. for reference a transmitter 12 to measuring the delay over multiple of paths of a network by sending out multiple packets using the well known ping procedure and for reference to receiving responses, which are acknowledgements, on the paths corresponding to the packets sent using the ping procedure)**. Schuster et al. also discloses determining by an analyzer of the network device a state of a network resource based on a comparison of response times to the first type of packet to a threshold and selecting by the transmit/receive element one of the paths based on the state of the network resource **(See column 14 line 54 to column 15 line 16 and Figures 4 and 5 of Schuster et al. for reference to the transmitter 12 using the responses to determine a delay for each of the paths, comparing the delays to a threshold delay indicating whether a path is in a useable state, and selecting one of the paths based on the comparison of the delays to the threshold)**. Schuster further discloses initiating by the transmit/receive element a data transfer on the selected path **(See column 14 line 54 to column 15 line 16 and Figures 4 and 5 of Schuster et al. for reference to the transmitter 12**

routing a signal over a selected path). Schuster et al. does not explicitly disclose also using a second type of packet used to perform a control related function, analyzing responses to the second type of packet to determine a state of network resources, and selecting a path based on the state of network resources.

With respect to claim 51, Schuster et al. discloses an admission control facility comprising an interface element receiving a request to initiate a data transfer **(See column 14 lines 35-53 of Schuster et al. for reference to a device for routing requested data based on selecting among routes that have been established in a network)**. Schuster et al. also discloses a data transfer element to transmit a plurality of reflector packets, including a first type of packet used to determine time delay, to a destination and receive responses to the plurality of reflector packets **(See column 12 lines 12-32, column 12 line 58 to column 13 line 7, column 14 line 54 to column 15 line 16, column 15 lines 29-40, and Figures 4 and 5 of Schuster et al. for reference to measuring the delay over paths to a destination by sending out multiple packets using the well known ping procedure and for reference to receiving responses, which are acknowledgements, on the paths corresponding to the packets sent using the ping procedure)**. Schuster et al. further discloses an analyzer to determine response times associated with the response to the first type of packet and to determine whether to initiate the data transfer based the response times **(See column 14 line 54 to column 15 line 16 and Figures 4 and 5 of Schuster et al. for reference to using the responses to determine a delay for each of the paths and determining whether to select a path to route a data request based on a**

comparison of the delays to a threshold). Schuster et al. also discloses initiating a data transfer **(See column 14 line 54 to column 15 line 16 and Figures 4 and 5 of Schuster et al. for reference to routing a signal over a selected path)**. Schuster et al. does not explicitly disclose also using a second type of packet used to perform a control related function, analyzing responses to the second type of packet to determine a state of network resources, and selecting a path based on the state of network resources.

With respect to claim 52, Schuster et al. discloses a method performed by a network device comprising receiving by an interface of the network device a request to initiate a data transfer **(See column 14 lines 35-53 and Figure 2 of Schuster et al. for reference to a method performed by a transmitter 12 for routing requested data based on selecting among routes that have been established in a network)**. Schuster et al. also discloses transmitting by a data transfer element of the network device a plurality of reflector packets toward a destination and receiving by the interface responses to the plurality of reflector packets **(See column 12 lines 12-32, column 12 line 58 to column 13 line 7, column 14 line 54 to column 15 line 16, column 15 lines 29-40, and Figures 4 and 5 of Schuster et al. for reference to the transmitter 12 measuring the delay over paths to a destination by sending out multiple packets using the well known ping procedure and for reference to receiving responses, which are acknowledgements, on the paths corresponding to the packets sent using the ping procedure)**. Schuster et al. further discloses determining by an analyzer of the network device response times associated with the received responses to the first type of data packet, determining by the analyzer a mean or variance of the response times, and determining by the analyzer whether to initiate the data transfer based on a comparison of the mean or variance of the response times to a threshold **(See column 5 lines 16-29, column 12 lines 12-32, column 14 line 54 to column 15 line 16, and Figures 4 and 5 of Schuster et al. for reference to the transmitter 12 using the responses to determine an average delay and a delay variance for each of the paths and determining whether to select a path to route a data request based on a comparison of the average and variance delays to a threshold)**. Schuster et al. also discloses initiating by the data transfer element a data transfer **(See column 14 line 54 to column 15 line 16 and Figures 4 and 5 of Schuster et al. for reference to the transmitter routing a signal over a selected path)**. Schuster et al. does not explicitly disclose also using a second type of packet used to perform a control related function, analyzing responses to the second type of packet to determine a state of network resources, and selecting a path based on the state of network resources. Shuster also does not explicitly disclose the paths being label switched paths.

With respect to claim 2, Schuster et al. discloses the first type of packet including time delay packets **(See column 12 line 12 to column 13 line 7 of Schuster et al. for reference to sending ping packets, which are time delay packets)**. Schuster et al. does not disclose the second type of packet including a control packet used set up a path.

With respect to claim 10, Schuster et al. discloses analyzing response times based on packets transmitted on multiple paths **(See column 14 line 54 to column 15 line 16 and Figures 4 and 5 of Schuster et al. for reference to evaluating the delay times based on packets transmitted on multiple paths)**. Schuster et al. does not explicitly disclose the paths being label switched paths.

With respect to claim 12, Schuster et al. discloses selecting one of the paths based on the analysis of the response times **(See column 14 line 54 to column 15 line 16 and Figures 4 and 5 of Schuster et al. for reference to selecting one of the paths based on the delay times)**. Schuster et al. does not explicitly disclose the paths being label switched paths.

With respect to claim 24, Schuster et al. discloses transmitting a group of packets on each of multiple paths, receiving responses on the multiple paths, and determining the response times associated with the received responses **(See column 12 lines 12-32, column 12 line 58 to column 13 line 7, column 14 line 54 to column 15 line 16, column 15 lines 29-40, and Figures 4 and 5 of Schuster et al. for reference to measuring the delay over a plurality of paths by sending out multiple packets using the well known ping procedure, for reference to receiving responses, which are acknowledgements, on the paths corresponding to the packets sent using the ping procedure, and for reference to determining the delay times of each path based on the responses)**. Schuster et al. does not explicitly disclose the paths being label switched paths.

With respect to claim 26, Schuster et al. further discloses determining a mean or variance of the response times and determining whether select a path to initiate the data transfer based on a comparison of the mean or variance of the response times to a threshold **(See column 5 lines 16-29, column 12 lines 12-32, column 14 line 54 to column 15 line 16, and Figures 4 and 5 of Schuster et al. for reference to using the responses to determine an average delay and a delay variance for each of the paths and determining whether to select a path to route a data request based on a comparison of the average and variance delays to a threshold)**. Schuster et al. does not explicitly disclose the paths being label switched paths.

With respect to claim 44, Schuster et al. does not disclose the paths comprising label switched paths.

With respect to claims 53 and 54, Schuster et al. does not disclose the second type of packet including a control packet used set up a path.

With respect to claims 2, 10, 12, 24, 26, 43, 44, 46, 51, and 52, Akahane et al., in the field of communications, discloses using a second type of packet used to perform a control related function, analyzing responses to the second type of packet to determine a state of network resources, and selecting a path based on the state of network resources **(See page 4 paragraph 53 and Figure 4 of Akahane et al. for reference to network devices using an IS-IS process, which includes transmitting packets and response to the packets, to determine link bandwidth information of individual router links, which corresponds to a state of network resources, and for reference to selecting a path from among multiple possible paths based on**

bandwidth information of each path). Akahane et al. also discloses using label-switched paths **(See page 1 paragraph 8 and page 3 paragraph 42 of Akahane et al. for reference to using an MPLS network including label switched paths)**. Akahane et al. further discloses the second type of packet including a control packet used set up a path **(See page 4 paragraph 53 and Figure 4 of Akahane et al. for reference to the packets being path calculation and path setting request packets used to set up a path)**. Using a second type of packet used to perform a control related function, analyzing responses to the second type of packet to determine a state of network resources, and selecting a label switched path based on the state of network resources has the advantage of allowing an optimal network path to be selected for routing data.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Akahane et al., to combine Using a second type of packet used to perform a control related function, analyzing responses to the second type of packet to determine a state of network resources, and selecting a label switched path based on the state of network resources, as suggested by Akahane et al., with the system and method of Schuster et al., with the motivation being to allow an optimal network path to be selected for routing data.

With respect to claims 3 and 17, Schuster et al. discloses the received responses including acknowledgements to the packets **(See column 12 line 58 to column 13 line 7 of Schuster et al. for reference to received packets being responses, or acknowledgements, to ping packets)**.

With respect to claims 4 and 18, Schuster et al. discloses a timer configured to track time after the first type packets are transmitted **(See column 7 lines 3-17 and column 11 line 61 to column 12 line 11 of Schuster et al. for reference to using a clock to track the time after packets are sent)**.

With respect to claims 7, 47 and 49, Schuster et al. discloses determining a mean of the response times and determining a network state and whether to initiate data transfer based on a comparison of the mean to the threshold **(See column 12 lines 12-32, column 14 line 54 to column 15 line 16, and Figures 4 and 5 of Schuster et al. for reference to using the responses to determine an average delay for each of the paths and determining whether a network state is suitable to select a path to route a data request based on a comparison of the average delay to the threshold)**.

With respect to claims 8, 48, and 50, Schuster et al. discloses determining a variance of the response times and determining a network state and whether to initiate data transfer based on a comparison of the variance to the threshold **(See column 5 lines 16-29, column 14 line 54 to column 15 line 16, and Figures 4 and 5 of Schuster et al. for reference to using the responses to determine a delay variance for each of the paths and determining whether a network state is suitable to select a path to route a data request based on a comparison of the delay variance to the threshold)**.

With respect to claims 20-22, Schuster et al. discloses each of determining both the mean and variance of the response times, determining only the mean of the response times, and determining only the variance of the response times **(See column 5 lines 16-29, column 12 lines 12-32, column 14 line 54 to column 15 line 16, column 15 liens 29-40 and Figures 4 and 5 of Schuster et al. for reference to the delay measurement being taken in any manner described with the manners described including using both a mean and variance of delays, using only the mean of delays, and using only the variance of delays)**.

With respect to claim 27, Schuster et al. discloses the method being performed partially in a client and partially in an admission control facility **(See column 14 lines 35-53 of Schuster et al. for reference to the route being between a service provider and a receiving device meaning the method is performed between an admission control facility of the service provider and a client receiving device)**.

4. Claims 5, 19, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. in view of Akahane et al. and in further view of Kaffine et al. (U.S. Pat. 6654914 B1).

With respect to claims 5, 19, and 45, the combination of Schuster et al. and Akahane et al. does not specifically disclose the analyzer proceeding with analysis of the received responses if the timer indicates a predetermined elapsed time prior to receiving responses for all the first type of packets.

With respect to claims 5, 19, and 45, Kaffine et al., in the field of communications, discloses an analyzer proceeding with admission analysis if a timer indicates a predetermined elapsed time prior to receiving responses to packets **(See**

column 14 lines 38-48 of Kaffine et al. for reference to timing out a ping if no response is received within a configurable timeout period, meaning connection analysis proceeds after the timeout period prior to receiving a response to a ping). An analyzer proceeding with admission analysis if a timer indicates a predetermined elapsed time prior to receiving responses to packets has the advantage of making sure the analyzer does not wait indefinitely for a response before proceeding with analysis when a response is not sent.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Kaffine et al., to combine an analyzer proceeding with admission analysis if a timer indicates a predetermined elapsed time prior to receiving responses to packets, as suggested by Kaffine et al., with the system and method of Schuster et al. and Akahane et al., with the motivation being to make sure the analyzer does not wait indefinitely for a response before proceeding with analysis when a response is not sent.

Response to Arguments

5. Applicant's arguments filed 12/22/08 have been fully considered but they are not persuasive.

Regarding Applicant's argument that the combination of Schuster et al. and Akahane et al. does not render the limitations of claim 43 obvious, the Examiner respectfully disagrees.

First, it is pointed out that some of the Applicant's arguments appear to be directed towards limitations not currently found within claim 43. For example, Applicant argues that Akahane et al. does not disclose sending on each of a plurality of paths a plurality of reflector packets of a second type. While this argument may be correct, it is moot, since the current language of claim 43 does not require a plurality of reflector packets of a second type be sent on each of a plurality of paths. The actual claim language recites, "sending, by the network device, a plurality of reflector packets on each of the plurality of paths, where the plurality of reflector packets include a first type of packet used to determine timing-related information and a second type of packet used to perform at least one control-related function". According to the current claim limitation, a plurality of reflector packets are sent on each of a plurality of paths, but there is no limitation regarding sending a plurality of second type packets on each of the paths. Rather, the plurality of reflector packets must at minimum include one packet of the second type. This packet of the second type is not required to be sent on each of the paths by the current claim language. Thus, it is recommended that the claim be amended such that it is clear that a plurality of reflector packets of the second type are sent on each of the plurality of paths. If the Applicant has any questions as to how the current claim language is being interpreted, please contact the Examiner at the number provided below in order to clear up any confusion.

Regarding Applicant's argument that there is no reason or motivation to combine the teachings of Akahane et al. with the system and method of Schuster et al., the Examiner respectfully disagrees. The messages and response taught by Akahane et al.

are used to determine individual router link bandwidth information (See page 4 paragraph 53 and Figure 4 of Akahane et al.). The determined link bandwidth information is then used as part of a process of selecting a path for data to be routed on. Thus, by using link bandwidth information as part of a path selection process, a more optimal network path may be selected by taking into account current network loading conditions corresponding to the link bandwidth information. Thus, it would be obvious to include these messages, as disclosed by Akahane et al., with the system and method of Schuster et al. in order to allow a more optimal network path to be selected for routing data.

Regarding Applicant's argument that Schuster et al. does not disclose the method being performed partially in a client and partially in an admission control facility, as stated in the limitations of claim 27, the Examiner respectfully disagrees. Applicant argues that Schuster et al. does not disclose where the processing is being performed; however this argument is moot, since the claim does not include any limitations regarding the location of processing. Rather the claim is directed towards the method being performed partially in a client and partially in an admission control facility. Schuster discloses the method being performed between a service provider, which comprises an admission control facility, and a client receiving device (See column 14 lines 35-53). The ping messaging disclosed by the method of Schuster et al. is performed by sending messages between an admission control facility and a client. Since the messaging itself (the ping messaging) is sent between a client and an admission control facility, the method is performed partially in a client and partially in an admission control facility, as claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON E. MATTIS whose telephone number is (571)272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason E Mattis
Examiner
Art Unit 2416

JEM

/Jason E Mattis/
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